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EDUCATION COMMITTEE

ANNUAL REPORT

OF THE

School Medical Officer

FOR THE YEAR

1919.

COLCHESTER:
Wiles & Son, Trinity Street.

1920.

Medical Inspection Sub-Committee, 1919-20.

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Asst. School Medical Officer and Asst. Medical Officer of Health:

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School Ophthalmic Surgeon:

DR. G. YOUNG, M.D.

School Dentist:

MR. T. ROBINSON, L.D.S.

School Nurse:

MISS M. A. MACKENZIE.

Physical Training Instructor:

H. LAMONBY.
(Appointed January, 1920.)

Clerk to Education Committee:

E. H. BULTITUDE.

PUBLIC HEALTH DEPARTMENT,
36, STANWELL STREET,
12*th April*, 1920.

TO THE CHAIRMAN AND MEMBERS OF THE EDUCATION COMMITTEE OF THE BOROUGH OF COLCHESTER.

MR. CHAIRMAN, LADIES AND GENTLEMEN,

I have the honour of presenting to you my Annual Report upon the work of the School Medical Department for the past year. The first four months were lost owing to Dr. Oswald's resignation as School Medical Inspector and the appointment of a new Officer in her place, and it speaks well for the co-operation of all concerned, School Doctor, School Nurse and Teachers, that the year's work was completed satisfactorily and efficiently in the time available.

At the end of Sir George Newman's Report for 1918 are given a new and more complete set of Annual Tables, and it is suggested in that Report that these Tables should be adopted for the Annual Reports dealing with 1920. The adoption of these Tables will involve some re-organisation and alteration of the present methods of recording the Medical Inspection work, but it seems advisable that this should be done and that the Tables for 1920 should be in accordance with the suggestions made.

I wish to draw your special attention to the valuable and instructive Appendix to this Report upon the Uncleanliness of School Children's Heads by Dr. R. H. Vercoe. This Report should do a great deal to correct misconceptions about Pediculosis and should help considerably to free the Schools from this condition. Parents must be taught to be ashamed to send their children to school with nits in their heads.

In conclusion, I beg to thank the Committee for their continued support, and the Head Teachers for the interest and help they have ungrudgingly given, to the work of the School Medical Department.

I am, Ladies and Gentlemen,
Your obedient servant,
W. F. CORFIELD,
School Medical Officer and Medical Officer of Health.

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Report of the School Medical Officer for the Year 1919.

The daily average number of children on the School Registers was 6,315, a decrease of 109 on last year's number.

The daily average attendance was 5,645, giving a percentage of 89·4, an increase of 1·0 on the 1918 figure, which was particularly low owing to Influenza and Measles, though both diseases have occurred to some extent in 1919 also.

Dr. Estcourt-Oswald resigned her appointment as School Medical Inspector in February, but continued to see children upon two afternoons a week at the Minor Ailments Clinic until the appointment of an officer in her place.

At the end of April Dr. R. H. Vercoe, B.A. (Camb.), M.R.C.S., L.R.C.P., D.P.H. (Oxon.), was appointed Assistant School Medical Officer and Assistant Medical Officer of Health. He started work at the end of May and it was not until then that the Routine Examinations for the year were begun.

The number of Elementary Schools remains the same as in 1914, i.e. 21, including the Special School for Mentally Defective Children.

There are 9 Council Schools and 12 Non-Provided Schools. They are divided into 28 departments, as follows:—

	Council School Departments.	Non-Provided School Departments.
Mixed Departments	5	2
Infants' Departments	6	3
Mixed and Infants' Schools	2	6
Girls' and Infants' Schools	—	1
Boys' School	—	1
Girls' School	—	1
Special School ... ... (for Mentally Defective Children)	1	—
Totals	14	14

The new school in Hamilton Road was given up by the War Department during the year and will be opened as a Central

School with an Infant and Junior Department early in 1920. The Central School will contain about 300 places, and the Junior and Infant Department 200 places.

At several of the schools open-air classes are held during the summer in the playgrounds and at Barrack Street School such a class is held for delicate children in a specially constructed shelter, the children being chosen by the head teacher in consultation with the School Medical Officer.

Three schools—St. John's School, Ipswich Road, Parson's Heath School, and Stanway All Saints' School—were closed for a fortnight in March, owing to the outbreak of Influenza.

St. John's School, Ipswich Road, was again closed for 14 days in October, owing to an outbreak of Chicken-pox.

INFECTIOUS DISEASE.

The following table is made out on the same lines as in previous years :—

Incidence of Infectious Disease amongst Elementary School Children in four weekly periods.

Scarlet Fever.	Diphtheria.	Whooping Cough.	Measles & German Measles.	Chicken Pox.	Mumps.
5	1	4	—	—	—
2	5	8	—	—	—
7	2	2	—	—	—
5	2	7	1	—	—
1	3	—	—	15	2
2	5	15	—	5	—
3	2	38	—	1	2
—	3	—	—	—	—
2	—	20	1	—	—
7	3	18	2	—	—
7	1	—	2	15	1
20	2	7	21	6	1
10	3	3	68	1	—
71	37	122	95	43	4

ROUTINE OF MEDICAL INSPECTION AND SELECTION OF CHILDREN.

All the Routine Medical Inspections are carried out upon the school premises with two exceptions.

At Magdalen Street School and Kendall Road School these inspections are carried out in a neighbouring house, the schools themselves being inconvenient for the purpose. This arrangement has the approval of the Board of Education.

The three Routine Groups were examined; entrants to school life; intermediates, i.e. children aged 8 years; and leavers.

Owing to the year's work having to be completed in six months, the rule was adopted for the year that only Routine cases should be seen at the schools and that Special cases should be sent to the Treatment Clinic. In this way Dr. Vercoe was able to get through the whole of the Routine examinations, but with the result that no special cases can be shown on Table I., all of them having been seen among other children at the Clinic.

As all children aged 12 years and over were inspected in 1919 the rule of inspecting as leavers, only children aged 12 years, will be re-adopted in 1920. This will lessen the number of children examined in this group in future.

The increase of work caused by examining all children of 12 years and over, instead of all children of twelve years only, is shown by comparing the number of children examined in 1915 with the number in 1919 :—

		Entrants.	Intermediate.	Leavers.		Totals.
1915	..	600	450	566	..	1616
1919	..	527	469	1212	..	2208

The year 1915 is chosen as it was the year in which the Intermediate group, aged 8 years old, was first fully inspected, previous to this date, children aged 7 years had been examined.

Miss Mackenzie continues her work as School Nurse and Nurse at the various Clinics.

During the year under consideration, her time has been very fully employed assisting at the Medical Inspections, Weighing and Measuring Children preparatory to Medical Inspection and assisting at the Clinics.

Owing to Routine Medical Inspections having been in abeyance for 1917 and 1918 and to their not beginning until May, 1919, there was a great deal of back work to make up. By the end of the year all children due for inspection had been examined. This necessitated a large amount of work and the time of the Nurse was so occupied that the following-up of children found to be defective could not be kept up and it was found necessary to appoint a temporary additional Nurse for December. In this way the greater part of the arrears were made-up.

At the same time the fact must not be lost sight of that if the School Medical Work is to be developed so far as it should be, the whole time of another Nurse could easily be filled.

As Dr. Vercoe points out, the Treatment Clinic is congested with cases and no doubt many of these could be treated by a Nurse in the schools were a Nurse available.

An ideal arrangement is for a Nurse to visit each school once every day and see (*i*) children requiring treatment; (*ii*) children apparently unwell; (*iii*) children who have recently been under treatment either at the General or Infectious Hospitals; and (*iv*) children from houses where Infectious Disease has occurred.

Simple remedies would be kept at each school for the use of the Nurse and having finished her visit to the school she would look-up cases reported ill at home before passing on to her next school. The benefit to the children would be immense and school attendance would undoubtedly increase, as parents would send their children to school with increased confidence and parents needlessly keeping their children at home would be persuaded into sending them by the visits of the Nurse.

Work of the School Nurse.

Number of visits* to homes and schools in connection with ailing children	617
Number of visits to schools for Weighing and Measuring	31
,, times present at Medical Inspections .	82
,, ,, Dental ,, ..	27
,, ,, Minor Ailments Clinic ..	116
,, ,, Dental ,, ..	57
,, ,, Eye ,, ..	42
,, surprise visits to schools for Pediculosis Inspections	35
Number of children examined at these visits ..	6372
,, children found with Pediculosis (Boys 50, Girls 433)	483

* The visits (200) of the additional Nurse appointed for December are ncluded among these

In addition to the above work, the School Nurse does the greater part of the clerical work connected with the records of the various clinics and sends out various notices to Head Teachers and Parents.

EMPLOYMENT OF CHILDREN OUT OF SCHOOL HOURS.

During the war restriction upon child labour was relaxed to some extent and boys of 9 and 10 years old were frequently to be seen selling papers in the evenings and otherwise helping to take the place of the men away at the war.

Early in the year under consideration, a special enquiry was made into this subject, and it was quickly found that many children were suffering both mental and physical deterioration from the work they were doing outside school hours.

Each head teacher was asked to give certain particulars with the name and age of each employed child in his school, and it was found that there were 420 children being so employed.

Out of these 420 children the bad cases were selected and 141 employers were found to be breaking the Employment of Children Bye-laws of 1913.

The majority of these were not serious infringements, the most common being the continuation of work before school until 8.30 a.m., instead of ending at 8 a.m., or in the case of paper boys 8.15 a.m., and children under 12 years of age being given regular employment, whereas the bye-laws only allowed work of a light and casual character. The ages of these children varied from 10 years to 14 years old, but there were several below 10, two of the worst being (i.) a boy of 9 years and 10 months old, who worked 25½ hours per week running errands and delivering vegetables, and (ii.) a girl of 9½ years who worked 24½ hours a week as a house girl. The latter was an interesting case in that she had found the place for herself and was satisfied with 6d. a week as wages.

The worst cases of working long hours were four errand boys who worked from 35 to 40 hours each per week, a paper delivering boy who worked 32½ hours, and a lather boy who worked 37 hours in his father's shop.

Steps were at once taken to bring the Employment of Children Bye-laws to the public notice and employers were warned that though these bye-laws had been allowed to lapse somewhat during the war, they would in future be strictly enforced.

Under the Education Act, 1918, fresh duties are imposed upon Local Authorities to enable them more strictly to regulate the employment of children. The Colchester Bye-laws of 1913 have been very carefully revised and altered to bring them into line with recent legislation and to reduce the amount of child labour, and at the time of writing they are under the consideration of the Home Office.

There can be little doubt that this can only result in great benefit, both mental and physical, to the children.

All school teachers and health officers will welcome the reduction in the hours of work allowed per week and the abolition to a very large extent of work before school.

METHODS EMPLOYED AND AVAILABLE FOR TREATMENT.

All the various Clinics and arrangements that were available for the treatment of school children in 1914 were revived or reinvigorated in 1919.

The Dental Clinic is now open upon two mornings a week, a second morning having been found necessary in 1917.

The work proceeds smoothly and satisfactorily and a certain percentage of the children (see page 29) are greatly benefitted thereby. But there are still a large number of children requiring treatment in other age groups than those dealt with and further time should be arranged for Dental Treatment.

At present, at his inspections at the schools, Mr. Robinson sees all children between the ages of 6 and 8 years and those children whom he has previously inspected. Many are found requiring treatment (see table on page 29), and these are invited to attend the Clinic, but a very large proportion do not accept this invitation, yet even so, Mr. Robinson is kept fully employed. Were further time available for following-up and for Dental Treatment, parents ignoring the invitation for their children to attend the Clinic could be visited and the wisdom of their accepting such treatment pointed out to them, also an additional age group might be inspected and those requiring it, treated.

The Minor Ailments Clinic has continued under the Assistant School Medical Officer, as in previous years. Towards the end of the year, arrangements were made for the daily treatment at the Clinic, of children with discharging ears.

A more organised scheme for the treatment of defects of the nose and throat is becoming necessary. At present, the child with this defect is reported to its parents as requiring treatment and they are urged by the Medical Officer and School Nurse to get the necessary treatment from their own doctor. This results in the majority of such children who get treated being dealt with at the General Hospital.

This method is cumbersome, and a good many children get no satisfactory treatment. If an arrangement, whereby these children could be referred direct to the General Hospital were made, more speedy treatment of an increased number would result, the time of the Medical Officer and Nurse would be saved and parents would no longer need hospital letters before their children could be treated.

The Eye Clinic every Thursday afternoon continues as before. Dr. Young, Ophthalmic Surgeon to the Essex County Hospital, Colchester, has been appointed Ophthalmic Surgeon to the Education Committee and he sees the children sent to this Clinic.

During the year, the methods adopted at the Eye Clinic have been revised and modified. The custom had been for cases that had been prescribed spectacles to come up every six months to have their spectacles re-tested and examined. It was found that this choked the Clinic and delayed Dr. Young's more important work with the new cases. It has now been arranged that the Assistant School Medical Officer shall hold an Eye Clinic for old cases upon another day.

Cases of Ringworm of the head are treated by X-rays by Dr. Curl, Hon. Physician to the Essex County Hospital, at this Hospital.

The Minor Ailments Eye and Dental Clinics are all held at 2, Trinity Street, where the Assistant School Medical Officer and School Nurse have their offices.

Occasionally cases of severe defect are found among the school children, and as in past years, these are sent to one of the London Hospitals.

VOLUNTARY ORGANISATIONS.

THE CHARITY ORGANISATION SOCIETY.—Has given help in following-up children and making enquiries as to the ability of parents to pay for the child's spectacles, in those cases in which parents expressed their inability to pay.

THE MAYOR'S POOR CHILDREN'S FUND.—Has provided milk for ill-nourished children and in a few cases, boots and clothing, and has sent children to Convalescent Homes.

THE NATIONAL SOCIETY FOR PREVENTION OF CRUELTY TO CHILDREN.—Has, through their Inspector, investigated certain cases brought to their notice. Mr. Jones, the N.S.P.C.C. Inspector, has always been most helpful in giving information about children, and in reporting children, that he thinks require the assistance of the School Medical Department.

THE OGILVIE SCHOOL OF RECOVERY.—At Clacton, reserve three places for delicate children from the Colchester Education Authority. The children stay from three to six months or even longer at the School, and are much benefited thereby.

THE ESSEX COUNTY HOSPITAL.—Is situate in Colchester, and many children are treated, both as in-patients and out-patients. Cases of ringworm of the scalp are treated at this Hospital, under an arrangement made between the Education and Hospital Authorities.

REPORT OF THE ASSISTANT SCHOOL MEDICAL OFFICER.

Assistance rendered by the School Teachers.

The teachers have always co-operated most heartily in giving every assistance during the Routine Inspection and also in treatment of minor ailments.

With regard to pediculosis inspections, exclusion has as far as possible been avoided at a time which would interfere with term examinations, but the frequent surprise visits paid, at one school in particular, in connection with the observations on pediculosis contact (see appendix), must have been a very qualified blessing, as far as classwork was concerned, yet every assistance was given for the work.

With regard to much extra statistical material in investigating the correlation of home conditions, standards of intelligence, etc., certain head teachers went out of their way to furnish me with the facts, and their goodwill and help was of the greatest value.

The School Attendance Officer.

Mr. Webb has kept continuously in touch with the medical side of the schools in reporting certain children and in using his persuasive powers to expedite the remedy of neglected minor ailments and pediculosis.

Inspection of School Premises.

A practice was made of inspecting the classrooms and premises with the object of discovering the more remediable defects. Height and arrangement of DESKS were discussed with the head teacher and remedied; some of the seats in the country schools are however still without back support.

LIGHTING.—At Barrack Street Infants, the windows of the classrooms were thickly obscured to half their height by trees and shrubs, thus completely cutting off the winter sunlight, without giving much protection in summer. These have been cut right down, with an immediately beneficial effect.

All the classrooms of Canterbury Road Infants (one of the largest and newest schools) face due north, with one exception; this appears an extremely unfortunate design for young children for so many hours.

Degree of illumination is worst at the Central and Culver Street Schools, though much improved from what they appear to have been six years ago.

Percentage of Parents present.

ENTRANTS.		INTERMEDIATES.		LEAVERS.	
Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
77	75	53	59	29	41

From the above table it will be seen (as might be expected) that attendance of parents decreases steadily with each rise of age group and faster in the boys than the girls.

It is therefore quite misleading to give the total percentage of parents present without correction for proportion and age groups dealt with.

In addition to the usual printed notice, a further typed supplement is now enclosed to parents of leavers, asking them to make a special effort to be present.

Clothing.

As there are only two classifications, satisfactory and unsatisfactory, and these are the individual opinions of so many different teachers, the factor of the personal equation enters so largely that the figures must be taken with that reservation.

There is still a great deal too much " tight lacing " of the girls, not of course in the sense of attempting an hour-glass waist, but in casing up the whole thorax in high corsets, very tightly laced all the way, sometimes with steels. In some cases, such deformities as round shoulders are definitely being caused thereby, as well as the general constriction of breathing, etc. The fear of the parents that their girls will fall to pieces before their eyes if these straight waistcoats were left off, and the misdirection of money spent, is rather pathetic.*

It might well repay to have periodic parades by the Nurse with notes to the parents of pernicious conditions found—and following-up where no correction was made.

* It is hoped that notification to the Physical Instructor of such cases as these will have a beneficial effect. W.F.C.

Footgear.

The amount of harm caused if children have to remain sitting long hours with wet feet in winter is too obvious to need elaboration. Enquiries at the schools shew that, while in many, every possible means is being used for drying boots and stockings, yet there are some where improvement is still possible and a few where there is no system at present at all.

A circular form sent out at the end of the year to all the head teachers, shewed a return of **347** slightly leaky and **196** badly leaking boots or **9.5 per cent.** defective. Five schools had no drying arrangements at all, others suggested improvements themselves.

Uncleanliness of the Head.

Percentages of Pediculosis of the Head:—

	Boys.	Girls.	Girls, 1914.
ENTRANTS	5·6 per cent.	30 per cent.	23 per cent.
INTERMEDIATES ...	5 „	24 „	24 „
LEAVERS	7·3 „	25 „	40 „
TOTAL	6·3 per cent.	26·3 per cent.	29·9 per cent:

The column on the right is appended for comparison.

Control of Pediculosis.

A leaflet of information about pediculosis, with exhortation to plait all the girls' hair, was printed and distributed to every child to take home in the new year.

It is hoped that spread by school contact may be greatly minimised if plaiting of the hair is made general, in addition to other measures.

In November the School Nurse was instructed to make a series of special visits of instruction and demonstration to the homes of 123 children found to be heavily infested with nits. After a thorough trial for one month the experiment was discontinued owing to relatively poor results. These and other details are fully considered in the appendix.

The total number of children EXCLUDED from school for pediculosis was 246, including results of both Routine and Surprise Inspections.

The total number with pediculosis inspected at the Clinic was 433, of which 364 have been remedied, the remaining 69 having been excluded at the end of the school term will be seen again in January, 1920.

Prosecutions.

There were five prosecutions, resulting in fines in every case, which averaged 10s. per case.

Uncleanliness of the Body.

There were 27 children with dirty bodies (1·2 per cent.).

There was one case of pediculosis of the body, a girl of 12, with also heavily infested head. Instructions were given and the house, clothing, etc., disinfected by the Sanitary Inspector. Re-examination shewed recurrence and the parents were then prosecuted (included in total above) with the result of a £1 fine being inflicted. The house was again disinfected and re-examination three months later shewed no relapse, illustrating the effect of the fine.

Skin.

No Disease.	Ringworm, Body.	Ringworm, Head.	Impetigo.	Scabies.	Other Diseases.
2148	1	1	20	3	25

The low total of Ringworm cases is due to the fact that teachers point out any suspicious cases and send them to the Clinic where, if positive, they are excluded and treated.

Impetigo and Scabies cases are at once treated at the Clinic.

Other Diseases of the Skin.

Eczema.	Alopecia.	Ichthyosis.	Whitlow.	Septic Dermatitis.
30	2	1	1	1

Teeth.

	Sound.	More than 4 decayed.	Less than 4 decayed.	Sepsis.
ENTRANTS	77·4	12·7	9·8	7·4
INTERMEDIATES ...	40	31	24	11
LEAVERS	66·2	21·2	13	7

The above figures are all percentages.

It will be noticed that the Intermediate group has the worst teeth. The 1914 Report shews the same result in closely similar figures.

The absolute figures for Sepsis depend entirely on the personal equation of the observer, owing to the absence of any definition.

The absolute percentage for sound teeth will decrease steadily with the stringency of the standard, the time taken, assistance of mirror in looking for small spots of decay.

These estimates of percentages found correspond very fairly with those of the 1914 Report, but differ widely from some other observers.

By far the worst teeth in all the schools were those of the mental defectives. Four boys (average age 12) had more than four teeth decayed, all had sepsis, and three had marked pyorrhæa.

Of the three girls (average age 12), two had sound teeth and one had more than four decayed.

The teeth of all five with more than four teeth decayed, were also irregular and the enamel very thin. The pyorrhæa was very striking, almost unique for children.

Nose and Throat.

The total number of marked adenoids was 40 (i.e., 1.8 per cent.), and the ill effects usually caused if they are allowed to remain untreated are :—

Ear discharge and deafness (temporary and permanent).
Greater liability to nasal and bronchial catarrh.
Mental dullness. Cramped palate and dental arch.
Poor development of the chest, owing to shallow breathing.

The likelihood or presence of any of these concomitants determines the amount of pressure brought to bear on the parents for operation.

The nose and throat cases considered to require treatment were 39, these were all cases of marked adenoids, except two of very enlarged tonsils.

The total number of much enlarged tonsils found in Routine was 90. Many of these cases also had marked adenoids, but if not, they were not recommended for operation unless the tonsils were pitted and frequently sore.

Ear Discharge.

The total number of children with otorrhœa was 50 (i.e., 2.3 per cent.) This includes all those children with a definite history of intermittent discharge, not those only in which actual discharge was seen at the examination itself.

A complete re-examination was held at the Clinic at the end of year and several such children were found with wet ears which were quite dry at the Routine examination.

Owing to the chronicity of the complaint and the continuous frequent attention required, the only satisfactory method is treatment at the Clinic, and this was done towards the end of the year.

Hearing.

The total number of Intermediates and Leavers with defective hearing was 41 (i.e., 2.4 per cent.), the Entrants were not tested.

Of these, five with ear discharge, were treated at the Clinic.

External Eye Disease.

	Total	Per cent.	Other Disease.	Total
No disease	2171	98.3	Coloboma Iris	3
Blepharitis	19	.9	Iritis	1
Conjunctivitis	3	.1	L eye missing (accident)	1
Corneal Opacities	5	.2	L ,, microphthalmos	1
Other disease	10	.4	Bad nystagmus (albino)	1
			,, ,, (high myopia)	1
			Phlyctenular ulcer	1
			Occluded pupil	1

The occluded pupil has been referred to the Ophthalmic Surgeon for iridectomy. The rest of these cases were all treated at the Minor Ailments Clinic.

Vision.

Squint.

	ENTRANTS.	INTERMEDIATES.	LEAVERS.
TOTAL	17	5	25
PER CENT. ...	3.2	1	2

To see a squinting eye is pleasing or painful to the Medical Inspector according to the age of the child; if an entrant, with the squint still only intermittent, the use of the proper glasses can work a very striking and dramatic cure; if a leaver, with a fixed squint, although glasses may be desirable, the time has probably gone when the squint might have been corrected, and this means that the squinting eye becomes slowly blind, (see page 31).

At the completion of the Routine Inspections, a hunt was made for all squinters in the Infant Departments and those found were sent to the Eye Clinic as urgent cases, as no time should be lost while this defect is in an early stage.

Acuity of Vision.

DEFECTIVE.	LEAVERS.		INTERMEDIATES.	
	Boys.	Girls.	Boys.	Girls.
Per cent.	20	23.4	21.8	21.0

The high figure of defective vision in the younger group may appear surprising, in view of the lesser effect of school environment, but agrees with general experience (e.g., 1914 Report) and is usually explained as due to undeveloped brain conception at that age, and not to error of refraction of the eye.

Cases with visual defects found at the School Examinations, if requiring correction, are sent on to Dr. Young at the Eye Clinic, on Thursday afternoons. Old cases are re-examined at the Minor Ailments Clinic every six months, to see if any alteration in the glasses is necessary.

Heart and Circulation.

Per cent.	Organic.	Functional.	Anæmia.	Other Disease.
ENTRANTS ...	0	0	1·6	1·2
INTERMEDIATES	·9	·6	2·3	0
LEAVERS ...	1·8	1·2	1·0	·2

The other diseases were 2 Menorrhagia and 6 Erythromelalgia.

There were some cases of moderate vasomotor syncope, which are not included under any heading.

Anæmia was treated at the Clinic (see page 23) together with mal-nourished and ailing children.

Organic Heart Disease.

The "effort syndrome" (by standardised effort and noting pulse at minute intervals) was tested in all doubtful cases as well as in definite V.D.H. (valvular disease of the heart) and D.A.H. (disordered action of the heart) cases, but the significance of a good response seems much less clear than in adults. Although it may shew *present state* it does not follow that *prognosis* may not be temporarily masked by the difference between children and adults.

Information as to the presence or absence of abnormal breathlessness after exercise (from parents and teachers) was carefully taken into account. No case was definitely labelled "organic" on the evidence of a systolic murmur only.

A special clinic was held at the end of the year to re-examine all the heart cases in conjunction with the School Medical Officer. The conditions were unchanged and the findings corroborated.

The cases were all mitral disease; the worst case was a girl of 13 with 1½ inches dilatation and typical double mitral disease; she had had 5 attacks of Rheumatic Fever (house and home conditions were excellent, no dampness nor personal exposure, on the other hand there was a paternal family history of marked Rheumatoid Arthritis). She shewed some dyspnœa after severe exercise; she was stopped from drill, and the parents given general advice. There was no other case as marked as this. The next was a boy of 13 with ¼ inch dilatation, but good effort response, he had had Diphtheria 1½ years previously.

It will be noticed that there is a steady rise of percentage with each age group in the above Organic Disease column.

The past infectious disease history, (ignoring Measles and Whooping Cough as too universal), of the 20 Leavers with Organic Heart Disease is shewn in the following table, and is contrasted with the parallel table of total Infectious Disease for total Leavers.

Rheumatic Fever was only accepted on history of confinement to bed and painful joints. Less marked forms were grouped under the heading of Rheumatism; though the mildest least obvious attacks often produce the worst heart lesions.

Diphtheria and Scarlet Fever were not accepted without confirmatory history of removal to Fever Hospital, or at least four weeks spent in complete isolation.

Total Leavers.	1212	No Heart Disease.	Heart Disease.	Incidence of Association between Past History and Organic Heart Disease.
Past History.	Total.			
Rheumatic Fever ...	21	15	6	28·6 per cent.
Rheumatism ...	17	15	2	11·7 ,,
Diphtheria	46	43	3	6·4 ,,
Scarlet Fever ...	96	94	2	2 ,,
Residue	1030	1023	7	·7 ,,

Or expressing this table in fractions instead of percentages :—

There is :

1 case of Heart Disease in every 3½ cases of past Rheum. F.
1 ,, ,, 8 ,, Rheumatism.
1 ,, ,, 15 ,, Diphtheria.
1 ,, ,, 48 ,, Scarlet F.
1 ,, ,, 147 ,, Residue.

Therefore, in contrast with Residue incidence of 1 in 147, the association of Organic Heart Disease

with Rheumatic F. is 42 times more frequent than with Residue.
,, Rheumatism is 18 ,, ,, ,,
,, Diphtheria is 10 ,, ,, ,,
,, Scarlet F. is 3 ,, ,, ,,

Association incidence does not necessarily prove Causation, but the above figures are very striking.

So that Scarlet Fever appears to be the smallest factor in the above past histories, while Rheumatic Fever maintains its notoriety at the top of the list. It might be said that possibly some even of the Residue group might really be associated with a very slight subacute Rheumatic Fever attack which had been since forgotten.

The possibly aggravating factor of wet feet in school must not be forgotten (see p. 15).

The Rheumatic family history of the above 6 cases is interesting (see p. 26).

Tuberculosis.

Pulmonary—2. Non-pulmonary—4.

Of the 4 Non-pulmonary cases 1 was still active and Sanatorium Treatment was arranged.

Observation Cases.—Certain children to the number of 30 were specially selected for such conditions or combination of conditions as—loss of weight, progressive ailing, lassitude, night sweats, cough, etc., especially if in contact with an open case of tuberculosis, or having a bad family history.

They were made to attend regularly at the clinic in the afternoon, and there examined from time to time, charts were made of weight and temperature and their sputum examined. These observations were continued for several months for the purpose of detecting the earliest signs of incipient tuberculosis. Some of the more suspicious cases were later on taken for consultation to the Tuberculosis Dispensary, which they attended at intervals through the courtesy of the Tuberculosis Officer, in addition to the clinic, and there received cod liver oil, etc. Arrangements have now been made by which cod liver oil emulsion and Parrish's Food is being prescribed at the clinic to such similar cases at cost price, and free in cases of necessity.

Two children were definitely diagnosed as suffering from Pulmonary Tuberculosis. The first, a boy of 8, was in continuous contact with an "open" case in the person of his father. The mother and other three children were apparently unaffected, but this child was said to have always been pale and delicate from a baby. Examined a year previously as contacts nothing was found in any of them. Housing and home conditions were average. The child was excluded and arrangements made for treatment at a Sanatorium.

The second case was a girl of 13, who was at once excluded from school and after three weeks observation was similarly dealt with.

Housing and home conditions were poor.

There was no contact to be traced whatever.

Old Cases.

Six children were met with in Routine Examination who had been previously notified from various sources in previous years.

All of these were found, after observation, to be quite negative, and this was confirmed by the Tuberculosis Officer, but they are being still kept under observation. This illustrates either the remarkable difference of prognosis or the greater difficulty of diagnosis in this disease between children and adults.

Ailing Children.

Cases of anæmia and debility, in addition to those already described above, were similarly given cod-liver oil under the same arrangements at the Clinic.

Milk is also supplied from the Mayor's Poor Children's Fund, but given only at the schools.

Two of such children, both boys of 10, were sent to the Ogilvie School of Recovery at Clacton, with great benefit.

The first was suffering with frequent severe paroxysms of asthma and as his mother appeared to be suffering from active pulmonary tuberculosis, she was referred to the Tuberculosis Dispensary, where these suspicions were confirmed.

The boy was greatly improved and also removed from contact infection while in a particularly susceptible condition.

This case should be contrasted with the case of tuberculosis on page 22, where the child was evidently infected by his father.

The second case was a very ailing child, with a very bad family history of the only other children (2) having died of tuberculosis, and the mother a Sanatorium patient.

During the summer, 20 homes of ailing and anæmic children were visited, to investigate the conditions of environment.

Nervous System.

There were two cases (.1 per cent.) of epilepsy, with history of definite but infrequent attacks.

The six "other diseases" of the Nervous System were neurasthenia.

Speech.

There were five cases (.2 per cent.) of stammering.

There were nine cases of defective articulation.

Nutrition.

The number of children "below normal" was 240 and 14 were "bad," but there is no common standard of definition of terms.

Improperly cooked food is one of the very many factors associated with malnutrition and this appears to be corroborated by the very large proportion of furred and dirty tongues and foul breath which were met with, especially in the girl leavers in some town schools.

There was no obvious cause for this condition, such as very bad teeth, and it was quite beyond the legitimate normal variation for health.

Enquiry from the teachers also shews that vomiting in school, apparently due to indigestion, is rather frequent.

Other causes, such as actual deficiency of food, poor housing and home conditions, appear to be illustrated by the remarkable and rapid improvement in general health which commonly occurs in children from poor homes, after their convalescence from scarlet fever in the Fever Hospital, with the good food and fresh air obtained there.

Average Height and Weight.

Age.	CENTIMETRES AND KILOGRAMS.				INCHES AND POUNDS.			
	BOYS.		GIRLS.		BOYS.		GIRLS.	
	Height.	Weight.	Height.	Weight.	Height.	Weight.	Height.	Weight.
5	101·8	17·2	102·9	17·2	40	38	40·5	38
8	121·3	24·0	119·9	22·7	47·75	53	47	50
12	138.6	32·0	141·2	33·3	54·5	70·5	55·5	73·5
13	144.3	36.0	146·6	37·7	56·5	79·5	57·75	82

These figures were derived from approximately 1,000 children, equally distributed in each age and sex group.

The height standards at each school are periodically re-tested and the one weighing machine which is moved to each school is re-tested by the Inspector of Weights and Measures.

Rickets.

There were six cases of marked rickets, four of very old standing, which had been previously followed-up, and two entrants.

One very marked case in a country school was found, upon enquiry, to have been reared in the centre of the town of Ipswich.

Infectious Disease.

Two cases were found during Routine Inspections.

One was a case of whooping cough, the other scarlet fever, both were excluded at once.

Deformities and other Defects.

There were 27 deformities (1.2 per cent.), of which 13 were spinal curvature (3 marked, 10 moderate), and these are being treated by special drill at school.

The remainder are specified in the upper portion of the list of Other Defects, which follows.

	Entrants		Leavers		Inter-mediates		TOTAL.
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	
Lateral Curvature				13			13
Cleft Palate		1					1
Left Arm (malunited old fracture at elbow)...				1			1
Talipes, foot					1		1
Potts Disease of the Spine				1			1
Congenital Hip Joint Disease			1				1
Leg wasted from old Infantile Paralysis ...	1	1	1	2		1	6
Right Leg amputated above knee				1			1
Paralysis side of face			1				1
Thorax contracted, double Empyema scars ...	1						1
Dwarf, Achondroplasic			1				1
Double Big Toes (i.e., 12 toes)		1					1
Bifid Uvula				1		1	2
Synovitis, knee joint, marked, with effusion...			1				1
Hernia			1	1		1	3
Congenital Syphilis (very definite) ...			1	1		1	3
Urticaria (marked)				1	1		2
Incontinence of Urine		1		3	1	2	7
Chorea	1						1
Albino, very marked. with nystagmus ...	1						1
Worms—Thread...	4	7	2		1	1	15
,, —Tape					1		1
,, —Round			1				1
	8	11	10	25	5	7	66

Treatment had already been provided for all deformities of the foregoing list, except for the first four.

Of these, the cases of lateral curvature will have special drill under the Physical Instructor, while the cleft palate, deformed left elbow and talipes of the foot have been recommended for special consultation at a London Hospital.

Some "Family Histories."

Rheumatic Fever.

The circumstances of six children with Organic Heart Disease are given below (see also page 20).

Cases.	Number of attacks of Rh. Fever.	Housing Conditions.	Family History.
1	5	Dry.	Father and father's sister have marked Rheumatoid Arthritis, mother and four other children negative.
2	2	Damp.	Father has "heart disease," father's father died of rheumatism, one child died of "heart disease," remaining child negative.
3	1	Very damp.	Mother's sister had rheumatic fever three times, father has gout and rheumatism.
4	2	Dry.	Father has severe rheumatism, father's family ditto, no other child, mother negative.
5	1	Dry.	All negative.
6	1	Dry.	All negative.

Vision.

A FAMILY OF SQUINTERS.

George, aged 5, with marked left squint, has four brothers and sisters similar. Five squinters out of six children of school age in one family.

Retinoscopy shews that they are cases of hypermetropic astigmatism.

Elsie, aged 7, squint, intermittent.
Cecil, ,, 9, ,, permanent.
Violet, ,, 12, ,, intermittent.
Ernest, ,, 15, ,, permanent.
Albert, ,, 11, normal vision.
Baby, ,, 2, ,, (so far).
Mother and Father ,, (apparently)
Father's mother squinted.

Albinism.

1. ALBINO, aged 7, white hair and pink eye, with marked persistent nystagmus, extreme hypermetropia, over 10 D; very backward mentally.	Mother, yellow hair and blue eyes, also with marked persistent nystagmus, has external left squint; other child (dark) aged 10, in idiot asylum; mother's mother died in asylum.
2. PIEBALD, aged 6, median white streak in hair and forehead.	A cousin aged 12 (also seen in routine examination) has similar median streak, from occiput to forehead, and very pale straw coloured hair sharply defined from dark brown hair on each side. The mother and mother's sister have similarly pale median streak in hair and continued down the skin.

Comments.

With regard to both rheumatism and defective vision, one is struck by the frequency of association of defect between parent and child and the absence of any apparent environmental factor; and conversely, there is often no defect to be found when the environment appears to be most strongly detrimental.

Besides the above instances, one is continually meeting cases of high myopia in children who have only been at school for three years, and again children with marked defective vision are frequently accompanied at inspections by parents with a corresponding type of defect.

An exact knowledge of "control" figures of negative family association, when either parent or child is defective, would be necessary for a really scientific basis of conclusions, but is very difficult to obtain as one parent is always absent and frequently the other one also. However, in the case of the five squinters above, the family association is too overwhelming to escape assignment to anything else but a congenital origin.

The effect on the squint percentage of any school which was attended by such a family would be very striking and might easily cause false conclusions to be drawn from the school environment. At the same time, the importance of the hereditary factor is no excuse for neglecting improvement of environment, as the latter may determine whether the former is aggravated or minimised.

Minor Ailments Clinic.

The Clinic was open 116 times, on Tuesday and Friday afternoons.

The number of attendances made was 2348
,, children re-examined with pediculosis was 433
,, ,, treated for minor ailments ,, 281
,, ,, cured of ,, ,, 204

Defects treated were :—

Skin	Ringworm—Head ...	16	Adenoids	2
	,, Body ...	15	Tonsils and Adenoids ...	7
	Scabies	45	Anæmia	10
	Impetigo	109	Bronchitis and Asthma ...	3
	Other diseases	10	Tubercular Glands ...	1
Ear, discharge and defective hearing		5	Others	33
External Eye Disease		14		
Defective Vision and Squint ...		9		
Enlarged Tonsils		2	Total	281

In addition, there were 30 cases kept under observation for temperature and weight, etc. (see page 22).

Sixteen cases of ringworm of the head were treated by Dr. Curl by X-rays, and 16 (above) who refused X-rays, were treated with ointment at the Clinic.

For impetigo and scabies, special slips were printed with full directions for treatment and given to every such case to take home in addition to the medicament, as sometimes parents fail to attend or forget verbal instructions. Nevertheless, many cases of the latter do not clear up as they should if instructions were properly carried out, and these are now being re-admitted to school, with strict instructions to the teachers that cotton gloves be continuously worn in school and that the child be still kept under treatment.

Cases of external eye disease also commonly resist the local treatment necessary and on several occasions, severe cases which were remaining unchanged under home application of the ointment, shewed immediate marked improvement when made to come to the Clinic daily and be treated by the Nurse, or on some occasions by the school teacher to whom the drug was sent, instead of to the parent.

Ear Disease.—During the time when Routine Inspection was in full swing, it was impossible to give daily treatment to more than these five, but at the end of the year, all the cases giving a history of intermittent ear discharge were collected and re-examined, and those showing any active signs were made to attend at the Clinic at 4 p.m. every afternoon, for syringing and hydrogen peroxide treatment.

Children suffering from debility, malnutrition, anæmia, etc., were dealt with :—

(*a*) If necessitous, by the issue of free milk at the school.
(*b*) Later on it was arranged that Emulsion of Cod-Liver Oil, Parrish's Food, etc., should be prescribed at the Clinic, free to cases of necessity, and at cost price to others.

In addition to treatment of minor ailments, the Clinic is used on the same occasions for re-inspection of children excluded from school on account of pediculosis. The total number of these children was 433, many of whom had to pay repeated visits before they were clean. Their numbers obstructed the treatment time of the Clinic a good deal. There were in November, often a total of 70 cases in an afternoon and the congestion of the long, narrow passage-way between the waiting room and clinic room shewed the structural inconvenience of the clinic premises in this respect.

R. H. VERCOE,
Assistant School Medical Officer,
and Assistant Medical Officer of Health.

WORK OF THE SCHOOL DENTIST.

The School Dentist sees children at the Clinic or makes an inspection at the schools every Tuesday and Friday morning. He is assisted by the School Nurse, both at the schools and in the Clinic.

During the year 30 inspections were made at the schools and 55 mornings were spent treating children at the Clinic.

The following table gives the result of the inspections :—

No. of Children inspected by the Dental Surgeon ...	2766	
No. of Children with Sound Teeth	750	27·1 %
,, with Teeth Suitable for Treatment ...	1442	52·0 %
,, ,, Unsuitable ,,	574	20·7 %

The deciding factors of children with teeth unsuitable for treatment have varied considerably since 1914, they are now:—

(i.) the presence of one or two unsavable temporary front teeth (likely to be lost naturally in a few months), in a mouth otherwise healthy.

(ii.) unsavable temporary teeth in children above the age of 8 whose permanent teeth are sound. Such teeth are only treated if causing pain.

(iii.) highly nervous children are not treated unless in pain. There are not very many in this class.

Inspections were carried out at all the schools, except the following—North St., mixed and infants; East Ward, infants; Canterbury Rd., mixed; Myland; Old Heath; St. John's; Parson's Heath; and St. Mary's. These will be inspected in 1920.

There were not more than 3 Inspections in any one department.

In the 55 mornings spent in treatment at the Clinic 599 children were treated.

Number of Children attending the Clinic	611
,, Children Treated	599
Number of Carious Teeth Filled	381
,, ,, Extracted	886

It will be seen that out of 1,442 children found at the Dental Inspections to have teeth requiring and suitable for treatment, less than 41°/ₒ received treatment at the Dental Clinic.

At present the children whose parents fail to accept the invitation to bring their children to the Clinic are not followed up, as the dentist's time is completely filled with those who do accept. Even so he had not time to inspect at every school during the year.

Some parents, after ignoring the invitation, apply later to have their children's teeth treated, but this is not permitted, as it would only displace others and form a bad precedent. The parents are informed that their children will be seen again at the Dental Surgeon's next visit to the school. In this way a number of parents, who have refused the first invitation, accept the one in the following year. Once a child has had his teeth inspected he is seen again at each following inspection, whether his parents have accepted treatment for him or not. In 1914, when the Dental Clinic was started, only 33 per cent. of the parents accepted treatment, so the proportion now accepting has increased. Some of the parents not accepting no doubt get their children's teeth attended to privately.

At the inspections the cleanliness or otherwise of the teeth is noted and enquiries made as to the use of a tooth brush.

Number of children with clean teeth	..	785	or 16·6°/o
,, ,, dirty ,,	..	1570	,, 33·2°/o
,, ,, using a tooth brush	..	739	,, 15·6°/o
,, ,, not using a tooth brush		1631	,, 34·5°/o

EYE CLINIC.

The arrangements are that every child found with over 6/9th defective sight is given the opportunity of treatment at the Clinic. Too many parents still fail to accept the invitation to bring their children to the Clinic and more complete following-up of every case has been arranged.

Dr. Young, the Ophthalmic Surgeon, states:—

> "There is an appalling number of cases of convergent strabismus and the vast majority come for help years after onset, always too late. They have often been told the child would outgrow it. Most of these children show a considerable amount, or complete, amblyopia and this is hard or impossible to cure in very many cases. The public should realise the great danger of onset of squint and that the younger the child the quicker does amblyopia set in. This can always be avoided by immediate treatment and binocular vision be preserved, whereas delay means the loss of an eye."

Number of children seen at Clinic	..	..	135
,, spectacles provided	..	..	127
,, attendances ..	..	..	769
,, times the Clinic was open		..	42

PHYSICALLY AND MENTALLY DEFECTIVE CHILDREN.

Physically Defective Children are treated by being sent to the Ogilvie Homes at Clacton when they are suffering from such conditions as malnutrition or debility.

If they are suffering from some chronic illness, such as tuberculosis or some deformity, they are referred either to the Colchester Tuberculosis Dispensary, the Essex County Hospital or one of the London Hospitals.

Deaf and Dumb Children are sent to the Special School for these children at Margate, where there are now two children from Colchester.

Blind Children are sent to the Swiss Cottage School of the London Society for the treatment of the Blind. There were, during the year, two children at this Institution.

Mentally Defective Children are sent to the Special School for these children in Colchester. There were 18 children in the school at the end of the year and one child was resident at the Lexden Home of the Royal Eastern Counties Institution, Colchester.

At the age of 16 years, the children in the Special School are re-examined, and if necessary, referred to the County Authority for supervision.

Idiot and Imbecile Children are referred to the County Authority.

The children of the Special School are examined every six months, with a view to estimating what improvement they have made in their mental development.

The Tables below gives the Special Examinations carried out of mentally and physically defective children.

Reason for Examination.	Recommended for Special School.	Not Recommended.	Total.
Delicate or Ill-nourished ...	6	5	11
Deaf and Dumb	2	—	2
Other Conditions	—	5	5
Total Physically Defective ...			18
Mental Dulness	3	6	9

In addition to these children, three children were examined upon their leaving the Special School and were recommended for the supervision of the County Authorities.

The delicate or ill-nourished children in the above table who were not recommended for a Special School of Recovery were five children who showed doubtful signs of early tuberculosis. Four were above 12 years of age, the highest age at which the Ogilvie Home admits children, and one was 10 years old.

All of them were referred to the Tuberculosis Officer for his report. In two cases he reported definite signs of pulmonary tuberculosis, and in the other three he recommended three months exclusion from school and then a second examination,

The five " other conditions " were one each of the following :—

1. Abdominal Hernia, recommended to be exempt from school attendance.
2. Cleft Palate, recommended for operation at a General Hospital.
3. Club Foot, recommended for operation at a General Hospital.
4. Limitation of Movement at Elbow Joint, owing to old fracture, recommended for opinion at a General Hospital.
5. Employment out-of-school hours to both mental and physical detriment, this was stopped under Section 15 of the Education Act, 1918.

Of the six mentally dull children not referred to the Special School, one was an imbecile and referred to the County Authorities ; four were recommended for special attention in an Elementary School and one was referred for a further examination in three months, she has since been certified for a Special Residential School.

TUBERCULOSIS IN SCHOOL CHILDREN.

CASES NOTIFIED IN 1919.

Pulmonary Tuberculosis in children, aged 5-15 years			..	6
Non-pulmonary	„	„	..	7

Two of the Pulmonary cases died before the end of the year, One of these was an inmate of the Royal Eastern Counties Institution.

Cases of Tuberculosis in children, aged 5-15 *years, attending the Tuberculosis Dispensary and results,* 1913-1919.

Year.	Pulmonary.	Non-pulmonary.	Died.	Cured.	Under Treatment.	Under Observation.	Left the Town.	Sent to Sanatorium
1913 ...	26	21	6	—	23	—	4	4
1914 ..	10	16	2	11	31	1	—	—
1915 ...	11	13	10	3	26	8	1	1
1916 ...	7	18	8	—	27	10	—	2
1917 ...	5	5	5	—	19	10	—	1
1918 ...	11	6	9	—	14	15	5	2
1919 ...	2	4	1	—	13	15	1	—

THE TEACHING OF MOTHERCRAFT.

A class is now held in the schools in this subject for the elder girls and arrangements have been made for two of the girls to attend each week at the Infant Clinic for practical instruction and generally to render assistance with the babies.

Unfortunately, each pair of girls can only attend three times or a sufficient number do not get their turn at the Clinic. The girls have differed in the interest they have shown in Infant Welfare work, but this was to be expected and the result of the experiment, as far as it has gone, is decidedly favourable.

Care is taken that the girls are not simply made use of as messengers and to do odd jobs, one of the Health Visitors giving each pair of girls short talks during the work of the Clinic upon different points that arise, such as, the feeding of babies, their clothing and the importance of regular weighing, etc.

PHYSICAL TRAINING.

Towards the end of the year it was decided to appoint a Physical Training Supervisor and so soon as the appointment is made, children found at Medical Inspections to require special exercises of a remedial nature will be referred to him.

W. F. CORFIELD, M.D., D.P.H.,
Medical Officer of Health,
and School Medical Officer.

36, Stanwell Street,
Colchester.

TABLE I.

Number of Children Inspected

1st January, 1919, to 31st December, 1919.

A. "CODE" GROUPS.

	ENTRANTS.					
Age ...	3	4	5	6	Other Ages.	Total.
Boys ...	—	104	103	35	22	264
Girls ...	—	77	124	45	17	263
Totals ...	—	181	227	80	39	527

	INTERMEDIATE GROUP.	LEAVERS.					GRAND TOTAL.
Age ...	8	12	13	14	Other Ages.	Total.	
Boys ...	233	276	272	54	1	603	1100
Girls ...	236	255	312	41	1	609	1108
Totals ...	469	531	584	95	2	1212	2208

B. GROUPS OTHER THAN "CODE."

(1)	Intermediate Group (other than 8 years). (2)	Special Cases. (3)	Re-Examinations* (i.e. number of children Re-Examined). (4)
Boys	—	All sent to the Clinic.	See Minor Ailments Clinic.
Girls	—		
Totals	—	Included in Clinic Numbers.	—

* All defective children were, as far as possible, referred to the Clinics. The time available was too short for Routine Re-examinations at the Schools.

TABLE II.

Return of Defects found in the course of Medical Inspections in 1919.

Defect or Disease. (1)		Code Groups.		Specials.	
		Number referred for Treatment. (2)	Number requiring to be kept under observation, but not referred for Treatment. (3)	Number referred for Treatment. (4)	Number requiring to be kept under observation, but not referred for Treatment. (5)
Malnutrition		—	—	—	—
Uncleanliness—					
	Head	—	—	—	—
	Body	1	—	—	—
Skin	Ringworm—				
	Head	1	—	31	—
	Body	1	—	14	—
	Scabies	3	—	42	—
	Impetigo	20	—	89	—
	Other Disease	—	—	10	—
Eye	Defective Vision and Squint	190	—	9	—
	External Eye Disease	4	—	10	—
Ear	Defective Hearing	5	10	—	—
	Ear Disease	15	15	—	—
Teeth—	Dental Disease (see page)	—	—	—	—
Nose and Throat	Enlarged Tonsils	—	—	—	2
	Adenoids Enlarged Tonsils and Adenoids	36	—	3	6
	Defective Speech	5	—	—	—
Heart and Circulation	Heart Disease—				
	Organic	—	20	—	—
	Functional	—	5	—	—
	Anæmia	10	—	—	—
Lungs	Pulmonary Tuberculosis—				
	Definite	2	—	—	—
	Suspected	6	—	—	—
	Chronic Bronchitis	—	—	—	—
	Other Disease	—	—	—	—
Nervous System	Epilepsy	—	2	—	—
	Chorea	1	—	—	—
	Other Disease	1	—	1	—
Non-pulmonary Tuberculosis—					
	Glands	1	1	—	—
	Bones and Joints	—	2	—	—
	Other Forms	—	—	—	—
Rickets		2	4	—	—
Deformities		13	—	—	—
Other Defects or Diseases		12	30	—	—

TABLE III.

Numerical Return of all Exceptional Children in the Area in 1919.

			Boys.	Girls.	Total.
Blind (Including partially Blind).		Attending Public Elementary Schools	13	14	27
		Attending Certified Schools for the Blind	1	1	2
		Not at School	—	—	—
Deaf and Dumb (Including partially Deaf).		Attending Public Elementary Schools	19	26	45
		Attending Certified Schools for the Deaf	—	1	1
		Not at School	—	—	—
Mentally Deficient.	Feeble Minded.	Attending Public Elementary Schools	5	2	7
		Attending Certified Schools for Mentally Defective Children ...	17	9	26
		Notified to the Local (Control) Authority during the year	1	3	4
		Not at School	—	—	—
	Imbeciles.	At School	—	—	—
		Not at School	—	—	—
	Idiots.		—	—	—
Epileptics.		Attending Public Elementary Schools	7	—	7
		Attending Certified School for Epileptics	—	—	—
		Not at School	—	—	—
Physically Defective.	Pulmonary Tuberculosis.	Attending Public Elementary Schools	5	1	6
		Attending Certified Schools for Physically Defective Children ...	—	—	—
		Not at School	3	4	7
	Other Forms of Tuberculosis.	Attending Public Elementary Schools	2	2	4
		Attending Certified Schools for Physically Defective Children ...	—	—	—
		Not at School	2	1	3
	Cripples, other than Tubercular.	Attending Public Elementary Schools	13	17	30
		Attending Certified Schools for Physically Defective Children ...	—	—	—
		Not at School	—	—	—
Dull or Backward.*		Retarded 2 years	182	137	319
		Retarded 3 years	44	25	69

* Judged according to age and standard.

TABLE IV. — **Treatment of Defects of Children during 1919.**

Condition.	No. of Defects found for which Treatment was considered necessary.			No. of Defects for which no report is available.	No. of Defects Treated.	Results of Treatment.			No. of Defects not Treated.	Percentage of Defects Treated.
	From previous year.	New.*	Total.			Remedied.	Improved.	Unchanged.		
Clothing		—		—	—	—	—			
Footwear		—		—	—	—	—			
Cleanliness of Head ...		433		69	364	364	—			
Cleanliness of Body ...		5		—	5	5	—			
Nutrition		9		—	9	—	9			
Nose and Throat		39		20	19	19	—			
External Eye Disease ...		14		—	14	14	—			
Ear Disease		15		10	5	—	5			
Teeth (see page 17) ...		—		—	—	—	—			
Heart and Circulation ...		10		—	10	—	10			
Lungs		2		—	2	—	2			
Nervous System		3		1	2	—	2			
Skin...		211		64	147	147	—			
Rickets		2		2	—	—	—			
Deformities		13		13	—	—	—			
Tuberculosis—Non-Pulmonary		1		1	—	—	—			
Speech		5		5	—	—	—			
Mental Condition		—		—	—	—	—			
Vision and Squint... ...		199		72	127	127	—			
Hearing		5		5	—	—	—			
Miscellaneous		12		6	6	6	—			
Total		978		268	717	652	28			

* The return should show comprehensively all defects found during the year, from whatever source derived, which required treatment.

TABLE V.

Inspection, Treatment, etc., of Children during 1919.

(1). The total number of children medically inspected (whether Code Group, special or ailing child).	2415
(2). The number of children in (1) suffering from defects (other than uncleanliness or defective clothing or footgear) who require to be kept under observation (but not referred for treatment).	97
(3). The number of children in (1) who were referred for treatment (excluding uncleanliness, defective clothing, etc.).	519
(4). The number of children in (3) who received treatment for one or more defects (excluding uncleanliness, defective clothing, etc.).	348

Appendix.

Pediculosis of the Head in School Children.

The great diversity of ideas about this subject is well illustrated in the following extract from the local press, quoting a Councillor and J.P.:—

> " . . . . with regard to the disease prevalent in the schools in connection with the condition of children's heads. He did not know whether it was attributable to uncleanliness or to low dietary, but he thought the latter had something to do with it. He thought children should be safeguarded from catching the complaint: skull caps were worn in some London schools."

It seems therefore absolutely necessary to state the results of some work on pediculosis of the head in the schools during the latter half of 1919, and to give a brief note on head lice and nits.

Certain questions prominently suggest themselves:—

What is the significance of the presence in the head (*a*) of nits; (*b*) of lice (see page 48).

What is the relative importance of

(i.) PARENTAL NEGLIGENCE in the home; (ii.) Spread by SCHOOL CONTACT; (iii.) Other factors.

In the explanation of Pediculosis Capitis (lice in the head):—

(*a*) How LONG is required? (*b*) What is the BEST METHOD?
for cleaning up the head.

Causation.

1. What is the importance of

(*a*) PARENTAL NEGLIGENCE, as compared with SCHOOL CONTACT, in the causation of Pediculosis Capitis?

The answer to this question will be found in a consideration of the following observations, which were undertaken for this express purpose.

Immediately on the re-opening of the schools in September, after five weeks long summer holiday, two notoriously bad schools were selected (which had not yet been examined this year) for surprise visits, with results as under (girls only examined) :—

Date.	School.	Total.	Infested		Percentage bad.
			slightly.	badly.	
Sept. 2 ...	A.	92	3	42	45%
„ 4 ...	B.	293	27	81	27%

These figures of 45% and 27% badly infested heads found immediately at the beginning of a new term after the long five weeks holiday indicate that at this date PARENTAL NEGLIGENCE is the only factor worth serious consideration.

This view is re-inforced by the very small proportion of slight compared with badly infested heads, forming a contrast with what we shall find later below.

The definition of badly infested is approximately 100 nits per individual head; slightly infested means less than 10.

The whole 42 children badly infested at A. school were excluded at once; but on arriving at B. school and finding a further 81 requiring exclusion, it was realised that a halt must be called to further exclusion, owing to loss of grant, chokage of the clinic, etc.

Therefore only 16 were excluded and the matter referred to the Committee. The Committee decided to leave the remaining 65 in the school but to send the School Nurse round to all the homes of the 123 children badly infested, both excluded and non-excluded, to instruct the parents exactly how to cleanse the heads. The results were as follows :—

The 58 EXCLUDED from A. and B. schools were ALL CLEAN enough to be re-admitted within periods ranging from 3 days to 4 weeks: 100 per cent. remedied.

The 65 at B. NOT EXCLUDED shewed NONE really clean at the end of 4 weeks. The actual percentages of improvement being :—

absolute.	*very great.*	*moderate.*	*no improvement.*
0	14	15	67

These figures were almost identically paralleled by the infants' department at same school, none excluded, with no improvement, 68 per cent.

The contrast is, therefore, very striking between

Excluded children ..	improvement	100 per cent.
Non-excluded children	,,	14 ,,

The efforts of the School Nurse in teaching the parents at their homes, were no doubt an exceptional factor in securing such a good result in the excluded cases, but it nevertheless failed almost completely in the non-excluded children.

It is therefore evident that EXCLUSION was the potent elixir; containing such ingredients as fear of consequences, and possibly greater length of daylight and time.

It must be remembered, however, that some parents actually enjoy exclusion of their children, as enabling them to be employed at home or elsewhere, unless there is the real likelihood of tangible deterrents, such as fines, to be anticipated as a penalty.

Therefore the factor of PARENTAL NEGLIGENCE is overwhelmingly evident in :—

1. The very high percentages (45 and 27) of badly infested heads at the very first day of school re-opening after a long holiday.
2. The great contrast between the two groups of very clean and very dirty heads, with no intermediates to speak of.
3. The complete indifference shewn to both printed and verbal instruction alone, contrasted with
4. The astounding effect produced by exclusion from school and fear of consequences.

It is the usual experience in school inspections generally to find the same families repeatedly the worst, year after year; and conversely other families are always found to be clean, often under apparently unfavourable circumstances. For example, one can instance some very bad cases where the husband was earning exceptionally good wages, in contrast to a recent case of a labourer's wife, whose 16 children were never at any time found with a single nit.

1 (*b*). SCHOOL CONTACT.

The following figures will shew the result in this particular class of children (the poorest large school in the town) of leaving 98 clean children in contact at school for five weeks with 45 dirty headed ones.

At this school, B, where 65 children with badly infested heads were still left in school, three large classes, composed entirely of girls, were chosen for further observation. The first class being Standards VII and VI, ages average 12, the second being Standard V, average age 11, and the third being Standard IV, average age 10.

Of the total, 143 girls in these three classes, 98 were absolutely clean and 45 were dirty headed (28 bad, 17 moderate).

After five weeks school contact, the re-examination of the 98 clean children shews now 45 still clean, 18 slightly infested, 24 moderately and 11 very badly infested.

Re-examination of the 45 dirty heads shews approximately no change, one-third worse, one-third a little better, and one-third unchanged.

The change for the worse in the CLEAN children is shewn in the following table of the three classes :—

	September,			October.			
Standard.	Dirty.	Clean.	After five weeks' contact.	Still Clean.	Infested.		
					Slight	Mod.	Bad.
VII, VI ...	10	37	Shew	13	9	10	5
V	21	29	,,	18	6	1	4
IV ...	14	32	,,	14	3	13	2
Total ...	45	98	,,	45	18	24	11

Therefore after school contact with 45 dirty children for five weeks :—

45 out of 98 originally clean have remained STILL CLEAN, but—

35 out of 98 originally clean children have become definitely INFESTED.

It would appear that this infestation of 35 per cent. may be reasonably ascribed to contamination by SCHOOL CONTACT.

On comparing the figures in the three different standards above, it will be noticed that the degree of contamination produced does not vary directly with the proportion of original dirty children to original clean. In Standard V the proportion of original dirty is much higher than any other, the number remaining still clean is also higher. Therefore there are many modifying factors which control the extent of spread.

These are probably :—

(*a*) PARENTAL EFFORTS—Cleaning up at home as fast as contaminated at school.

(*b*) PLAITING the hair in some cases.

(*c*) Accidental SCATTERED DIFFUSION on the one hand or CONCENTRATION on the other hand of bad cases in the class seating arrangements.

SEGREGATION.—As there was very little changing of classrooms or lessons in this school, it was decided to try what the effect of segregation would be at the re-inspection in four weeks' time in November.

For this purpose, the youngest girls (Standard IV, age average 10) class was divided up in order of head cleanliness, the cleanest being in the row furthest from the dirtiest.

In the next class (Standard V), the seating arrangement was left unaltered, but strict injunctions were issued that all the children were to plait their hair at once.

The class of biggest girls (Standard VII, VI) was left alone.

At the end of four weeks, another inspection was made in November. The Standard IV class was found to be practically the same as when seen four weeks before. All the clean children were still clean, and all the dirty were still just as bad, with one exception, which had completely cleaned up in the interim and begged to be allowed to be moved, which, of course, was granted.

In the Standard V class, the clean girls were all still clean ; there was no time to examine the dirty ones. Plaiting was much increased but not universal.

The Standard VII, VI class also shewed the same as Standard V, but the majority of the dirty ones had got cleaned up in the meantime.

At the end of the inspection, the clean children in all the classes were openly commended for having kept themselves clean since the previous visit.

As the result on the clean children was the same in all three classes, it was impossible to draw any definite conclusions as to the efficacy of segregation or hair plaiting. Moreover, a third factor seems extremely probable, namely, that by this time the persistently clean members were types which would actively maintain themselves clean under any circumstances of contamination. This factor of the PERSONAL EQUATION is probably always the most important, just as we saw in the results at the school opening.

On December 16th, three days before end of term, a final visit was paid and all the 81 girls who were found dirty on September 3rd (beginning of term) were re-examined. Of all these, only 16 were still dirty and were now at last excluded. The great final improvement may have been due to the moral effect of repeated examination, with the invidious public distinction between the clean and dirty and to the admonitions of the teachers in the interim.

These 16 were now excluded, and would have the Christmas holidays (instead of using up school time) to get clean, and if still unfit for re-admission on the first day of term re-commencement, they were to be prosecuted without delay.

Of these 16, *one* failed to get clean in time (a very small mouse from the labouring mountain) and was taken into court, together with two cases from A school who were also found dirty again on December 17th, after having been excluded previously, three months before.

The result (in January) *was no fine in any of the cases*, although all the circumstances were carefully explained, it therefore seemed fortunate that under the circumstances the original 81 were not excluded on September 3rd.

1 (*c*). OTHER FACTORS.

The most important third classification is a modified form of the first, that is Parental Negligence, due to extraordinary causes more than ordinary carelessness. The nits are small ($\frac{1}{30}$ inch) and very firmly stuck to the hair by the cement substance, therefore a parent or guardian who has very bad sight or is very old, will be unable to see the nits or to pick them off so that the cleaning process cannot keep pace with the rate of hatching. There is obviously much extenuation in such circumstances.

Other causes seen are alcoholism or illness of the mother.

To such alleged causes as uncleanliness or low dietary (see page 40) may also be added illness of the child, and the three classed together as a confusion of ideas between causation and association due to a further common origin. There is historical interest however in this survival of abiogenesis from the Middle Ages (held by many parents) that small forms of life may originate from inanimate dirt.

With regard to spread in CLOAK ROOMS by contiguity of HATS, no lice could be found on inspection of the hats of four children known to be heavily infested, but Burn's Ode to a louse seen on the hat of a lady in church, indicates that possibly if time and opportunity had been equally favourable a similarly positive result might have been obtained.

One is not inclined to think that hats and cloak rooms are of very much importance in this connexion.

2 (*a*). CLEANSING.

What is the TIME required for completely cleaning up the head by removing or killing the nits as well as lice?

Heavy infestation (over 100 nits) can be remedied

(*a*) By an intelligent patient at the Fever Hospital in **3 hours.**
(*b*) ,, parent at home (e.g. four parents at A school) [in 50 hours.

And as seen on page 41

(*c*) With EXCLUSION + instruction, 100°/o A school in 3 weeks.
(*d*) ,, NON-EXCLUSION + ,, only 14°/o B ,, 3 ,,

(*b*). What is the BEST METHOD for "de-lousing" and "de-nitting"?

The destruction and removal of the LICE is fairly easily accomplished by the common methods of White Precipitate Ointment, Sassafras Oil, Paraffin or Lysol and presents little difficulty compared to the nits.

For removal of NITS, the simplest method of all is to CUT THE HAIR short to the scalp, but as this is a very unpopular procedure the NITS may be (i.) removed completely; (ii.) killed and left on the hair.

(i.) Removal of the nits from the hair is impeded by their small size (especially to parents with defective vision) and by their firmly cemented adherence (see page 48). On the other hand it can be carried out at home and maintains the independence of parental responsibility.

The problem is therefore to loosen the cemented attachment to the hair. A common way of doing this is to thoroughly soak the hair with WARM VINEGAR, then COMB with fine tooth comb and finally PICK OFF the remainder by finger and thumb.

To see if improvements could be made, hairs with nits thereon were soaked

(1) at 20° C. in (*a*) 20 per cent. acetic acid, (*b*) 5 per cent. potash, (*c*) 10 per cent. HCl.

(2) at 60° C. in (*a*) 20 per cent. acetic acid, (*b*) 5 per cent. potash, (*c*) 10 per cent. HCl., (*d*) tap water.

The hairs were then removed and the adhesion of the nits tested by drawing the finger and thumb over it, a method giving very little delicacy of differentiation, however.

The immersion in the cold solutions had no appreciable effect whatever, but in the hot solutions (temperature as hot as could be borne by the scalp) the nits were very much less adherent and could be easily drawn along and off the hair.

No difference could be detected by this means between the efficacy of any of the four hot solutions, and when they became cold the nits felt just as adherent as before treatment.

The hot-tap water seemed just as good as the other three solutions.

It seemed evident, therefore, that the HEAT of the liquids was the all important factor.

On trying this in practice, however, at the Fever Hospital (see above) the operator, using fine comb and fingers, shewed that the half of the head treated with hot vinegar was completely cleansed in 1½ hours, whereas, after the same time with hot water only, the other portion still had a few nits, though greatly reduced (to about 10 from about 200 originally).

On the cards of instruction "warm vinegar" was altered to "HOT vinegar" in red ink, and parents of excluded children volunteered the information that time was greatly shortened by the hotter temperature.

(ii.) Nits may be killed on the hair :—

(a) By the method of HOT IRONING with a hair dresser's irons after wetting the hair.

As demonstrated to me this took about half-an-hour to dessicate the nits of a heavily-infested head. It seems impracticable for the following reasons:—

It requires special skill not to burn the hair.

It cannot be applied very close to the scalp because of the great heat of the iron, and is not as thorough as other methods.

The nits can be afterwards removed more easily than when untreated (but not so well as with hot vinegar), but any failure to do so is very objectionable (see also below).

(b) By the method of soaking in 2 per cent. lysol or in kerosene as described by Bacot and Lloyd (B.M.J., 29/10/19) :—

Two per cent. lysol at 37° C. for 30 minutes ; kerosene at 20° C. for 5 minutes ; is described by them as killing the lice and nits.

The advantage is the short time required to treat a large number.

The disadvantages are :—

(1) The necessity of treatment under official supervision away from the home if it is to be at all trustworthy ; this tends to demoralise parental responsibility.

(2) The kerosene appears very dangerous.

(3) There is NO REMOVAL of the nits. This is the most serious objection of all, as it is impossible to treat the whole non-school civilian population as one would do in the army, and re-infection is sure to recur in the home ; therefore it would be impossible in school inspections to be sure whether there are not many fresh living nits amongst the old treated ones.

Where the parents were ill or defective in vision, the children were on some occasions made to clean each others hair under supervision at the clinic, to see if loss of school time could be thereby shortened. The system is still under trial.

WHAT IS THE SIGNIFICANCE OF NITS IN THE HAIR?

(*a*) Nits are the eggs of lice. They are less than $\frac{1}{30}$ inch in length and conical in shape. They are laid by the louse on the hair, to which they are attached by a very strong cement substance which is extruded as a liquid from the louse as the egg is laid and hardens at once. The narrow apical end of the egg points upwards to the scalp and is the part stuck to the hair, thus mechanically assisting the cement to resist removal by combing, brushing, etc.

About ten eggs are laid by one female per day and these hatch out in successive crops about the 9th DAY after being laid, into YOUNG LICE. Therefore it is essential to completely remove or kill them. If the head was properly cleaned once a week and the nits completely removed, we should see much less infestation.

(*b*). Lice are semi-transparent insects about $\frac{1}{8}$ inch long, rather lobster like in their tough resistent body envelope and jointed claw legs. They run quickly up the hair when alarmed, to take cover in the deeper layers, exhibiting a shy distaste for too pressing an interview. In colour they vary from a pearly fawn to a dirty dark brown, corresponding largely to the colour of their habitat. In fact, it has been shown that the larvæ of dark lice, when hatched out and reared on a white surface, become pale lice, and vice versa.†

They live entirely on the blood of the host, which they obtain by suction, after thrusting the pointed stabbers of the mouth deeply into the skin. This blood can be easily seen under low magnification, filling the louse's stomach as a sinuous crimson column, rhythmically contracting and dilating. As the feeding continues, a mixture of black excreta and red blood is defecated from the body of the louse on to the surface of the skin, through which this filth is inoculated into the system by scratching and abrasion.

The spread of the three epidemic diseases, typhus fever, relapsing fever and trench fever, depends entirely on the transference of body lice from persons suffering from these diseases to the bodies of healthy people.

The blood relationship between head and body lice is so close that they can be made to become identical after some generations,† and in the case of trench fever, it has been lately definitely proved (Byam, unpublished), that head lice are just as capable as body lice of transferring this disease.

Quite apart from the likelihood or otherwise of these diseases becoming epidemic in this country, these little vampires are at best very unsavoury guests, by reason of the excreta, the deposit on the skin which becomes inoculated by scratching, and the interference with sleep, caused by the irritation produced by their pedestrian activities.

† Parasitology, October, 1919, Nuttall.

Pediculosis of the head therefore means that the child's scalp is :

(1). An incubating nursery for nits and a playground for the larvæ.

(2). A busy breeding ground and a promenading parade for the adults.

(3). A dump for louse excreta.

(4). An emigration bureau for the infestation of clean heads, in addition to what has already been said on the score of ill-health.

PREVENTION.

Compulsory school attendance means that school contact is always tending to break down the resistance of clean children against contact infestation from pediculosis ones.

In this tendency to a levelling process, it is possible to level up or to level down.

Our aim is the former, but this will not be obtained by any methods which stop short of dealing with the source of all the trouble.

It is desirable to keep a black list of children found badly infested and to take particularly quick action in such cases.

Exclusion from school at beginning of term, together with clear printed instructions and prosecution of those who have no extenuating circumstances and are not clean within two weeks, appears to be the best course, in the interests of both clean and dirty headed children, but it requires sympathetic support by the Bench if it is to be efficacious.

In the case of illness at home or such genuinely defective vision in the parent, that the nits cannot be seen, there is no excuse why the child's hair should not be CUT OFF, to thereby remedy at once the standing menace to the health of the child and the cleanliness of its school neighbours.

R. H. VERCOE,
Asst. School Medical Officer
and Asst. Medical Officer of Health.

Return shewing the Physical Condition of Children Examined.

CONDITION.		ENTRANTS.				LEAVERS.				INTERMEDIATE GROUP, AGED 8 YEARS.				TOTAL.			
		Boys.	*Girls.*	*Total.*	*Per cent.*	*Boys.*	*Girls.*	*Total.*	*Per cent.*	*Boys.*	*Girls.*	*Total.*	*Per cent.*	*Boys.*	*Girls.*	*Total.*	*Per cent.*
	Total Inspected ...	**264**	**263**	**527**		**603**	**609**	**1212**		**233**	**236**	**469**		**1100**	**1108**	**2208**	
LOTHING	Satisfactory	248	248	496	94·1	576	592	1168	96·4	213	226	439	93·4	1037	1066	2103	95·2
	Unsatisfactory	16	15	31	5·9	27	17	44	3·6	20	10	30	6·3	63	42	105	4·7
OTGEAR	Satisfactory	246	248	494	93·7	587	593	1180	97·4	214	227	441	94·0	1047	1068	2115	95·7
	Unsatisfactory	18	15	33	6·3	16	16	32	2·6	19	9	28	6·0	53	40	93	4·2
UTRITION	Normal	252	249	501	95·0	499	518	1017	84·0	221	215	436	92·8	972	982	1954	88·4
	Below normal	9	14	23	4·4	99	87	186	15·3	12	19	31	6·6	120	120	240	10·8
	Bad	3	—	3	·6	5	4	9	·7	—	2	2	·5	8	6	14	·6
LEANLINES OF HEAD	Clean	249	183	432	81·0	559	457	1016	83·8	219	179	398	85·0	1027	819	1846	83·1
	Nits	15	80	95	19·0	44	152	196	16·2	14	57	71	15·0	73	289	362	16·9
LEANLINESS OF BODY	Clean	259	261	520	98·7	594	599	1193	98·4	233	234	467	99·6	1086	1094	2180	98·6
	Dirty	5	2	7	1·3	9	9	18	1·5	—	2	2	·4	14	13	27	1·2
SKIN	No disease	258	258	516	98·0	586	596	1182	97·5	222	228	450	96·0	1066	1082	2148	97·2
	Ringworm: Body or Head ...	1	—	1	·2	—	—	—	—	—	1	1	·2	1	—	2	·02
	Impetigo	4	3	7	1·3	3	3	6	·5	6	1	7	1·5	13	7	20	·95
	Scabies	1	—	1	·2	2	—	2	·2	—	—	—	—	3	—	3	·13
	Other disease	—	2	2	·3	12	10	22	1·8	5	6	11	2·3	17	18	35	1·58
TEETH	Sound	210	198	408	77·4	195	249	444	66·2	70	66	136	40·0	475	513	988	44·7
	Less than four decayed ...	34	33	67	12·7	64	78	142	21·2	44	62	106	31·0	142	173	315	14·2
	Four or more decayed ...	20	32	52	9·8	47	40	87	13·0	42	39	81	24·0	109	111	220	9·9
	Sepsis	7	32	39	7·4	26	20	46	7·0	24	23	47	11·0	57	75	132	5.9
NOSE AND THROAT	No defects	248	251	499	98·2	540	536	1076	88·8	209	210	419	89·1	997	997	1994	90·3
	Mouth Breathers	8	5	13	2·5	24	6	30	2·5	15	9	24	4·1	47	20	67	3·0
	Tonsils: slightly enlarged ...	3	7	10	2·0	21	29	50	4·1	3	9	12	2·6	27	45	72	3·2
	Tonsils: much enlarged ...	8	2	10	2·0	25	37	62	5·0	8	10	18	3·8	41	49	90	4·0
	Adenoids: slight	2	1	3	·5	11	3	14	1·1	1	3	4	·8	14	7	21	·9
	Adenoids: marked ...	4	1	5	1·0	11	8	17	·5	9	7	16	3·4	24	16	40	1·8
EAR DISEASE	No disease	263	257	520	98·7	584	596	1170	96·5	225	230	455	96·9	1072	1083	2155	97·5
	Otorrhæa: R.	1	6	7	1·3	9	9	18	1·5	5	4	9	1·9	15	19	34	1·5
	Otorrhæa: L.	—	3	3	·5	14	5	19	1·6	4	4	8	1·7	18	12	30	1·3
	Other disease	—	—	—	—	1	1	2	·2	1	—	1	·2	2	1	3	·1
HEARING	20 feet each ear (normal hearing)	Not	Tested.			588	597	1175	96·1	224	229	453	96·3	812	826	1638	97·6
	20 feet R.					6	2	8	·6	2	1	3	·6	8	3	11	2·4
	L.					1	6	7	·5	3	3	6	1·2	4	9	13	
	10 feet R.					9	6	15	1·2	5	4	9	1·9	14	10	24	
	L.					10	3	13	1·0	5	3	8	1·7	15	6	21	
	5 feet R.					1	4	5	·4	1	2	3	·6	2	6	8	
	L.					2	3	5	·4	—	1	1	·2	2	4	6	
VISION	6/6 each eye	Not	Tested.			484	464	948	78·2	185	186	371	79·1	669	650	1319	78·5
	6/6 R.					31	19	50	4·1	9	5	14	2·9	40	24	64	3·8
	L.					16	16	32	2·6	3	4	7	1·4	19	20	39	2·3
	6/9 R.					30	46	76	6·2	16	28	44	9·3	46	74	120	7·1
	L.					35	44	79	6·5	21	28	49	10·4	56	72	128	7·6
	6/12 R.					29	25	54	4·4	9	7	16	3·4	38	32	70	4·1
	L.					26	23	49	4·0	14	7	21	4·4	40	30	70	4·1
	6/18 R.					15	19	34	2·8	6	5	11	2·3	21	24	45	2·6
	L.					16	26	42	3·4	5	3	8	1·7	21	29	50	2·9
	6/24 R.					6	19	25	2·0	2	1	3	·6	8	20	28	1·6
	L.					7	20	27	2·2	—	2	2	·4	7	22	29	1·7
	6/36 R.					4	5	9	·7	3	1	4	·8	7	6	13	·7
	L.					2	5	7	·5	2	1	3	·6	4	6	10	·5
	6/60 R.					8	14	22	1·8	3	4	7	1·4	11	18	29	1·7
	L.					12	11	23	1·8	2	4	6	1·2	14	15	29	1·7
	6/0 R.					—	—	—	—	—	—	—	—	—	—	—	—
	L.					1	1	2	·1	1	—	1	·2	2	1	3	·1
SQUINT	... ...	11	6	17	3·2	9	16	25	2·0	2	3	5	1·0	11	19	47	2·1
EXTERNAL EYE DISEASE	No disease	261	260	521	98·9	592	596	1188	98·0	229	233	462	98·3	1082	1089	2171	98·2
	Blepharitis	—	1	1	·2	6	8	14	1·1	3	1	4	·9	9	10	19	·8
	Conjunctivitis	1	—	1	·2	1	1	2	·2	—	—	—	—	2	1	3	·1
	Corneal Opacities	—	1	1	·2	—	3	3	·3	—	1	1	·2	—	5	5	·2
	Other disease	2	1	3	·5	4	1	5	·4	1	1	2	·4	7	3	10	·4
SPEECH	Not defective	263	262	525	99·4	596	608	1214	99·4	232	233	465	99·1	1091	1103	2194	99·3
	Defective Articulation ...	—	1	1	·2	3	1	4	·3	1	3	4	·9	4	5	9	·4
	Stammering	1	—	1	·2	4	—	4	·3	—	—	—	—	5	—	5	·2
HEART AND CIRCULATION	No disease	261	252	513	97·2	586	579	1165	95·8	222	229	451	96·2	1069	1060	2129	96·4
	Organic disease	—	—	—	—	7	13	20	1·8	3	1	4	·9	10	14	24	1·0
	Functional disease ...	—	—	—	—	5	9	14	1·2	2	1	3	·6	7	10	17	·7
	Anæmia	3	5	8	1·6	5	7	12	1·0	6	5	11	2·3	14	17	31	1·4
	Other defect	—	6	6	1·2	—	2	2	·2	—	—	—	—	—	8	8	·3
LUNGS	No disease	244	244	490	93·2	583	594	1177	97·2	223	229	452	96.5	1050	1067	2117	95·8
	Chronic Bronchitis & Bronchial Catarrh	19	18	37	7·4	12	12	24	2·0	8	4	12	2·5	39	34	73	3·3
	Tuberculosis	—	—	—	—	—	1	1	·1	1	—	1	·2	1	1	2	·1
	Tuberculosis suspected ...	1	1	2	·4	5	2	7	·5	1	1	2	·4	7	4	11	·4
	Other disease	—	—	—	—	3	—	3	·2	—	2	2	·4	3	2	5	·2
TUBERCULOSIS (NON-PULMONARY)	No disease	262	263	525	99·6	603	608	1211	—	233	236	—	—	1098	1107	2205	99·8
	Glandular	2	—	2	·4	—	—	—	—	—	—	—	—	2	—	2	·1
	Bones and Joints	1	—	1	·2	—	1	1	—	—	—	—	—	1	1	2	·1
NERVOUS SYSTEM	No disease	264	263	527	—	601	607	1210	—	230	235	465	99·2	1095	1105	2200	99·6
	Epilepsy	—	—	—	—	1	—	1	—	1	—	1	·2	2	—	2	·1
	Other disease	—	—	—	—	1	1	2	—	2	2	3	·6	3	3	6	·2
RICKETS	No disease	252	261	513	97·2	599	605	1204	—	228	223	—	—	1079	1089	2168	98·1
	Slight	11	1	12	2·4	12	4	16	1·3	3	3	6	1·3	26	8	34	1·5
	Marked	1	1	2	·4	2	—	2	·1	2	—	2	·4	5	1	6	·2
DEFORMITIES	No deformity	263	262	525	—	598	590	1188	98·0	233	235	468	99·8	1094	1087	2181	98·7
	Deformity present ...	1	1	2	—	6	19	24	2·0	—	1	1	·2	6	21	27	1·2
	Other defects	8	11	19	—	10	25	35	—	5	7	13	—	23	43	66	—